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Grading Dressed Turkeys



FROM the producer's standpoint, the correct grading of turkeys is a very important factor in the success of his enterprise. Without dependable grading, successful marketing is practically impossible, and without successful marketing, little profit may be expected.

Whether the producer grades his own turkeys or has this done by a licensed grader, a familiarity with the grade descriptions and how the grades are applied will create a mutual understanding and be a source of satisfaction to producers, graders, and buyers.

How to grade according to Government standards can be learned by any producer who makes a thorough study of the grade factors involved. This bulletin attempts to point out by description and illustration the most important of these factors.

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Contents

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	Page		Page
Importance of careful grading	. 3	Defects and deformities to be considered in	. 19
Advantages of using Government standards for dressed turkeys	. 3	grading Bruises Torn skin	19 19
United States standards for dressed turkeys United States classes for dressed turkeys United States grades for dressed turkeys	. 5	Skin abrasions. Poor bleeding. Discoloration. Crooked breasts	20 20
General rules that apply to all classes and grades. Freezing Cleanliness Precooling Feed in crops Picking Wholesomeness Emaciation	14 14 14 16 16	Dented breastbones Peaked breasts Crooked backs Hunchbacks Crooked feet and toes Stagginess Internal feather growth Swollen joints Blue backs Weight specifications	21 22 23 23 23 23 23 24 25 27 28 23 23 23 23 23 23 23 23 23 23 23 23 23
General rules that apply to packing	17 18 19	Weight Specifications. Grade label and stamp License card Grading certificate Regrading at terminal markets. Outstanding considerations in grading	29 29 30 30

Grading Dressed Turkeys

By Thomas W. Heitz, formerly marketing specialist, United States Department of Agriculture¹

IMPORTANCE OF CAREFUL GRADING

THE marketing of poultry is highly competitive in the terminal wholesale markets. There is always a demand for turkeys of good quality, but stock of poor quality is sold to the less discriminating trade at lower prices. The "straight-run" pack of turkeys is no longer in demand, for buyers are coming more and more to require uniform and careful grading.

Even turkeys of good quality have little sales appeal unless they are carefully graded and packed. Some buyers want only small turkeys, some want those of medium size, and others want the heaviest ones that can be obtained. Some prefer hens; others, young toms. Some want only the highest quality obtainable, whereas a few want

medium-priced or low-priced stock.

To satisfy these varying demands, the careful packer should grade his turkeys strictly in accordance with definite standardized grades, so that a buyer who wants a number of turkeys of a certain weight and grade will not be obliged to buy several boxes or barrels of them in order to get what he needs. A few birds of second or third grade in a box or barrel of fine turkeys are likely to reduce the price of the entire pack. Careful grading and correct methods of packing usually enable the producer or shipper to establish a reputation for his produce, which is reflected in an increased demand for it and in larger profits for him.

ADVANTAGES OF USING GOVERNMENT STANDARDS FOR DRESSED TURKEYS

The universal acceptance and the correct use of the grades in the Government standards for dressed turkeys, certified by graders supervised by the Government, should benefit producers, dealers, and consumers. It would assure the producer a just and uniform grading, making it possible for him to market his turkeys on a basis commensurate with their quality. The turkey producer should receive a price commensurate with the quality of birds he sells and not be penalized by the lower price which the buyer often pays for ungraded turkeys, because he must make enough on the better birds to offset his losses on those of poorer quality.

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When turkeys are sold subject to grading by the buyer, the producer is at a loss to know how the buyer will grade them. When the crop is short or a rising market appears probable, there is a tendency for most buyers to grade freely in order to place as many turkeys as possible in the top grade. When the market is declining, commercial grading is usually rigid, and many turkeys that should be placed in the top grade are placed in a lower grade.

The Government standards, on the other hand, remain unchanged at all times, regardless of market conditions or seasons, and the Government grades are so supervised that the producers are assured of uniform grading when the Government standards are used (p. 3). Since the grading work was begun under Government supervision, the quantity of dressed turkeys graded has increased each year. Approxi-

mately 67,000,000 pounds were graded in 1943.

A notable result of the grading program has been the improvement in the quality of the birds offered for sale by producers who have sold their turkeys under this system of grading for several seasons. Almost without exception, the percentage of those that qualified for the top grades has increased each year. In some States where approximately half the crop was of U. S. Grade A quality at the beginning of the program, the percentage of birds of that grade has increased materially. It is not unusual now in some States to find a very high percentage of the turkeys sold by grade to be of U. S. Grade A quality.

The advantages of uniform grading according to uniform standards are almost as great for the country packer and shipper and the city dealer as for the producer. Under the usual commercial conditions the terminal-market receiver is handicapped in buying turkeys when he buys at country shipping points that are too distant to permit personal inspection. The producer's or shipper's idea of an "A" or a "B" turkey may not conform to the idea of the receiver or buyer. Commercial ideas of grading differ in different sections of the country, sometimes among different packers in the same section. In some markets it may happen that no two packs of turkeys received have been graded according to the same standards.

If Government standards and uniform methods of grading and packing were generally adopted, buyers would have more confidence when making their purchases, and producers and shippers, knowing their product would be graded by a qualified disinterested grader, would have less hesitancy in offering their turkeys for sale on a graded basis.

When disputes arise between buyer and seller, the producer, as well as the receiver, has recourse to an official regrading of the turkeys at terminal markets as part of the United States grading service. This regrading service has saved producers thousands of dollars and has safeguarded the receivers, who are often required to pay for carlot

shipments of turkeys before they are unloaded.

From the standpoint of the consumer, a tag that gives the correct grade is a valuable guide in the selection of a turkey. The producer should always bear in mind that it is the consumer's willingness or ability to pay that finally decides the price the producer will receive. Therefore, consumers must be satisfied if turkey production is to be profitable. The best way to satisfy consumers is to make sure that each one always gets the grade of turkey she pays for.

The average housewife buys a turkey only once or twice a year and

usually is not so well informed regarding the factors that make for quality in a dressed turkey as she is regarding other meat products. Consequently, she feels more confidence in her selection if the bird is labeled with a tag that shows its real grade.

UNITED STATES STANDARDS FOR DRESSED TURKEYS

The United States standards for dressed turkeys provide for both classes and grades. Besides this, certain other factors are to be given consideration when classing and grading are being done. The standards have been tested under actual operation for 15 years, and slight revisions have been made from time to time in the light of actual experience.

United States Classes for Dressed Turkeys

The United States standards for dressed turkeys provide four classes: Young Hens, Old Hens, Young Toms, and Old Toms.

SCHEDULE OF CLASSES, SUBCLASSES, AND GRADES FOR DRESSED TURKEYS

Age and sex classification	Dressing and packing classification	Grades			
Young Hens Young Toms Old Hens Old Toms	Plucking: Scalded Semiscalded Dry plucked Dressing: Dressed (undrawn) Eviscerated Finish: Milk-fed Grain-fed Chilling: Fresh dressed Fresh hard chilled Storage Packing: Dry Iced	U. S. Grade AA. U. S. Grade A. U. S. Grade B. U. S. Grade C.			

These four classes are necessary because different values are attached to the respective grades. The young birds are always worth more than the old; certain classes of trade prefer hens; others prefer toms. For the preseason or post-holiday trade, the large toms are usually most in demand, for at those seasons most of the turkeys are used by restaurants and hotels, which prefer large birds. For the Thanksgiving and Christmas trade the hens and small young toms are usually in most demand, as most of the turkeys for the holiday trade are retailed for family use.

Young birds can be determined by the appearance of the flesh and by the flexibility of the breastbone. The flesh of the young bird is fine-grained and soft, whereas that of an old turkey is coarse, somewhat darkened, and tough. The tenderness of the flesh can be determined by pressing the flesh of the breast between the ends of the thumb and forefinger. If the bird is young, the flesh can be easily penetrated, and the thumb and finger will easily press through to the breastbone. If the flesh is hard and "rubbery" it is an indication of greater age, and more roasting will be required to make it tender.

The relative age of the turkey whether young or old can be ascertained by feeling the keel bone. If the cartilage on the end of the bone is flexible and moves back and forth easily, the turkey is young. If the bone is hard and rigid so that it cannot be moved, the cartilage has

hardened into bone and the turkey is classed as Old.

Further indications of age are evidenced by the appearance of the skin. Old turkeys usually have a coarse skin, and unless they are very fat the skin is loose and flabby, whereas the skin of the young turkey adheres more closely to the flesh and is soft and velvety. Feather follicles in the skin of the old birds are deeper and farther apart, giving the skin a rough, uneven appearance.

CLASSIFYING YEARLING HENS AND STAGGY TOMS

It is not difficult to differentiate between a very old turkey and a very young one, but there are many turkeys of intermediate age, such as yearling hens and staggy toms, that may be difficult to classify. Usually a turkey is classed as Young until it reaches 1 year of age, but this is not always the case. The breastbone of a young hen nearing the age of 1 year is usually rather rigid, and the flesh begins to take on the characteristics of an old hen. Breeding and laying have a tendency to harden the flesh of the hen turkey; and although it is true that many young hens begin laying at 5 or 6 months of age and are still soft-meated, the characteristics of an old hen soon show after the laying season begins. Hens that have been laying have a greater width between the pelvic bones, and the vent is moist and somewhat enlarged. Where these conditions are apparent the usual practice is to classify the turkey as Old, especially if the keel bone has become somewhat rigid and the flesh is coarse and darkened. Where the turkey appears to have tender flesh, even though the keel bone is only slightly flexible, the bird is classified as Young. Usually a hen turkey will not take on excessive fat until the second year. When such fat appears, it is a fairly good indication that the turkey should not be classed as Young.

The correct classification of a young tom nearing maturity is highly important, because the age of a young tom, unlike the age of a young hen, is an important factor in the grading of the bird. For example, a hen nearing maturity may be classed as Old or Young without the grade being affected. However, a tom nearing maturity and that shows staggy characteristics, is usually classed as Young but is not permitted in a grade above U. S. Grade B. One of the first indications of approaching maturity in a tom is spur development. Spurs appear as little knobs on the legs long before the flesh has become hardened and are not always an indication of age. A young tom should never be graded down on account of spur development alone. Rather, the appearance of spurs indicates that a close examination of the bird is desirable. As long as the meat is soft and fine-grained and the keel bone is flexible the turkey should be classed as Young.

As a young tom develops, the skin of the breast becomes soft and flabby, and, as development further progresses, it becomes badly puffed and pouchy. After this condition develops, the turkey may still be classed as Young if the meat is still somewhat softened, but the turkey should not be graded higher than U.S. Grade B. If the breast is only somewhat softened and not puffed, the turkey may be graded as U.S. Grade A.

Occasionally a turkey is found in which sexual development is such that classifying it is difficult. The body may be long and rangy and have the appearance of that of a young tom, while the head may be fine-cut and narrow, as characteristic of a young hen. By an examination of the vent of such birds, as is done in sexing baby chicks, the true sex can usually be determined. It is usually best to place such a turkey in the class to which its body most conforms, so that the appearance of the pack will not be spoiled by a lack of uniformity of body shape.

SUPPLEMENTAL CLASSIFICATION FOR TURKEYS

Other conditions, which relate to plucking, dressing, finish, degree of chilling, and packing, make it necessary to establish further classifications.

PLUCKING.—Three methods of plucking the feathers from turkeys are used: The full-scald, the semi-scald, and the dry-picked. Each of these methods has a direct bearing on the appearance and keeping quality of the turkeys. Therefore, in classifying and grading dressed turkeys the method by which the carcasses have been plucked should be taken into consideration.

The full-scald method is used mostly when producers dress and market their turkeys locally. The carcass is immersed in water heated to a temperature of from 170° to 180° F. The hot water opens the skin pores, makes the skin very tender, and lowers the keeping quality of the bird. The effects of full scalding are so damaging to the skin, that turkeys which have been plucked by this method are not permitted in the U. S. AA Grade and U. S. A Grade.

The semiscalded method is used chiefly by dressers at country pack-The carcass is immersed for about 30 seconds in water heated to a temperature of from 125° to 128° F. For satisfactory results the temperature of the water must be within this range. An operator should not attempt to use this method unless he is properly equipped and has acquired a knowledge of its operation through an experienced workman. The method has many advantages over full scalding and dry picking. The skin is not injured, and resulting conditions are such that the pinfeathers are readily removed.

The dry-picking method of plucking is used by both producers and packers who ship to distant markets, and in most sections of the country turkeys are dry-plucked for the local markets. No water is used. The feathers are loosened by piercing the lobe of the brain which controls the feather muscles. The producer who dresses his own turkeys will find this method of plucking the most satisfactory and should not attempt any other method without the advice of a skilled

operator.

DRESSING.—Dressed turkeys are usually marketed either as undrawn or eviscerated. At the present time, most turkeys are marketed undrawn, that is, the head, feet, and viscera are not removed. During the last few years, however, the quantity of eviscerated poultry, including not only turkeys but chickens, fowl, and ducks, has increased steadily. Eviscerated turkeys are prepared under Government inspection and in the process are completely cleaned and made ready for the oven. These are usually individually packaged to give greater protection from the time they are processed until they are delivered to the consumer.

FINISH.—The kind and quality of feed received by turkeys have an important bearing on the appearance of the bird and the quality of the meat. The Tentative U. S. Standards for Classing and Grading Dressed Turkeys, promulgated November 6, 1942, recognize two kinds of finish—milk-fed and grain-fed. The term "milk-fed" is associated with light-skinned birds, while those with a yellow- or cream-

colored skin are referred to as grain-fed.

Originally, the term "milk-fed" was used in referring to turkeys receiving milk during at least the finishing period. However, a light-colored skin which may have the appearance of a milk finish does not necessarily mean that the turkeys have received a large quantity of milk or any milk at all. Feeds containing little or no xanthophyll, such as wheat, oats, and barley, will produce birds with a light-colored skin. Turkeys supplied during the last few weeks with a reasonable amount of succulent green feeds or yellow corn, both of which contain large amounts of xanthophyll, will usually have a creamy color

or vellow appearance.

CHILLING.—Turkeys may be marketed as fresh-dressed, fresh hard-chilled, or storage stock. The chilling condition of turkeys should be taken into consideration when they are graded. Freshdressed turkeys are those that have not been either hard-chilled or Fresh hard-chilled turkeys are those that have been hard-chilled but not frozen long enough to develop the appearance of cold-storage stock; they must not have been held in storage more than 60 days. Storage turkeys are those that have been held at a low temperature for 60 days or more or show evidence of deterioration and freezing regardless of the length of time held. The most noticeable effects of storage on poultry are dryness of skin and loss of body bloom. Dry, scaly spots, known as "freezer burn," may also be present on the surface of the skin, and the eyes may be shrunken and discolored. blood around the cavity of the mouth or where the bleeding cut was made is dark brown in color instead of red and usually has an unpleasant odor.

PACKING.—Two refrigerating mediums are used to keep the turkeys in good condition during transit to market. One is ice, and the other is cold air. Dressed turkeys that have been packed in ice are known as ice-packed; those that have been subjected to cold air are known as dry-packed. Because the contact of ice with the carcasses is injurious to their keeping quality and to the appearance of the skin, dressed turkeys that have been refrigerated by this method are not permitted in the U. S. Grade AA. When dry packing is used, the air is cooled by ice or by mechanical refrigeration; the turkeys are kept

dry and do not come in direct contact with the ice.

United States Grades for Dressed Turkeys

The United States standards provide four grades for the dressed turkeys in each of the four classes: U. S. Grade AA, U. S. Grade A.

U. S. Grade B, and U. S. Grade C.

U. S. Grade AA is the highest grade. To be placed in this grade, a carcass must be a commercially perfect specimen of any of the four classes of dressed turkeys. The requirements for this grade are high; only a small part of the turkey crop will qualify. Birds of this grade are found mostly in the output of commercial producers who employ careful feeding and management methods. Dealers and packers who buy miscellaneous small lots of dressed turkeys are not likely to find many carcasses that qualify for this grade. The few turkeys of this quality that are received in such lots can usually be packed to best advantage with those of the U.S. Grade A for it is not worth while to segregate them into a separate pack.

U. S. Grade A is the grade of turkeys that represents excellent table quality, according to the United States standards. In the markets it is commercially considered as "top" quality because it is the

highest grade obtainable in commercial quantities.

U. S. Grade B turkeys are considered commercially to be of very good quality and usually command a price that is within 2 or 3 cents

a pound of that received for turkeys of the U. S. Grade A.

U. S. Grade C is the lowest grade. Any edible turkeys may be included in this grade except those that are excluded by the detailed descriptions for this grade.

QUALITY DESCRIPTIONS OF THE INDIVIDUAL GRADES

U. S. GRADE AA.—The first thing to consider in deciding whether a turkey is of high enough quality to grade U. S. Grade AA is the quantity of flesh on the carcass. This grade calls for a full-This means that the carcass must have a broad, fullmeated breast and that the back and all bones must be fully covered The meat of the breast should be even with the breastbone and flat across the top rather than pointed. Turkeys that are fullfleshed have very little of the characteristic dark meat showing through Turkeys of the male sex have narrower breasts than those of the female sex; therefore, a U. S. Grade AA tom turkey would have a breast full-fleshed only in accordance with the characteristics of the sex.

In the case of either young hens or toms, the flesh of the bird must be soft, fine-grained, and tender and have a translucent appearance. This is usually true of all young birds that have been properly fed. But if young birds have been allowed to run at large, the constant exercise in search of food hardens the muscle fiber and makes the birds coarse and hard-fleshed, which cause the carcasses to be placed in a

grade below U. S. Grade AA.

Turkeys that grade U. S. Grade AA must be especially well dressed. The feathers must be completely removed from the carcass and all noticeable pinfeathers must be removed. The butts, heads, and feet must be clean. There must be no feed in the crop that can be detected by feeling or by sight, for any kind of feed is likely to ferment and sour the flesh of the bird. Very slight skin abrasions are permitted if they are not on the breast. There must be no tears in the skin, and even slight discolorations and skin bruises are not allowed on the breast. No flesh bruises are permitted on any part of the carcass. A flesh bruise may be distinguished from a skin bruise by moving the skin from side to side. A skin bruise is a blood clot attached to the underskin and will move as the skin is moved. If the blood clot is stationary and does not move with the skin the bruise is a flesh bruise and is not permitted in the U. S. Grade AA, even if it occurs on the wing tip or on the back.

A dented breastbone is usually spoken of as a notched breast and is not to be confused with a crooked breast. If the dent is not more than one-eighth of an inch in depth it is not a disqualification for this grade. The depth of the dent can be measured by placing a straight piece of cardboard or a straightedge along the top of the breast and then with

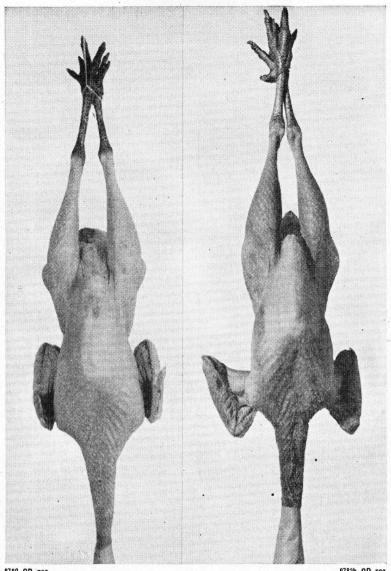
a rule measuring the depth of the depression.

Crooked breastbones or other deformities, such as swollen joints or crooked backs, are causes for disqualification in the grade of U. S. Grade AA. No broken bones, open tears, or sewed skins are permitted.

Because of the poor appearance of scalded turkeys and because their keeping qualities are not as satisfactory as dry-picked or semiscalded birds, they are not graded as U. S. Grade AA. (Fig. 1 (left).)

U. S. GRADE A.—Turkeys that are well-fleshed but not necessarily full-fleshed are included in the U. S. Grade A: also included are those that are full-fleshed but have dressing defects that are permitted in the U. S. Grade A though not in the U. S. Grade AA. The young birds must be soft-meated and tender. They must be well-fleshed throughout, with back, hips, and bones well covered with fat. The hip fat and the breast fat must be connected with fatty tissue over the abdominal region. The bleeding requirements are almost as strict for the U. S. Grade A as for the U. S. Grade AA. More pinfeathers may be permitted, especially if scattered over parts of the carcass other than on the breast. The breast must be practically free from pinfeathers, and the crop must be empty. If the crop is not empty when the bird is killed, however, it must be washed out or removed through a small incision in the back of the neck.

Slightly discolored skin or small skin bruises and abrasions do not disqualify a carcass for this grade unless they are on the breast. Small flesh bruises may be included if they are not over one-half of an inch in diameter and are not on a heavily fleshed part of the carcass. In this grade, the dent in the breast may not exceed one-fourth of an inch in depth, in contrast to one-eighth of an inch in the U. S. Grade A crooked breastbone is not permitted, and if the bone is so curved that it will interfere with the slicing of the meat, the turkey must be placed in a lower grade. No deformities of any kind are permitted. Wings broken above the wing tip or broken legs are permitted. One disjointed leg or wing is permitted if it is not bruised at the joint. No open tears in the skin are permitted on any part of No sewed tears are permitted on the breast. Dressing requirements are the same as for U.S. Grade AA; that is, the bird must be semiscalded or dry-picked and dry-packed or ice-packed. (right).)



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Figure 1.—(Left) U. S. Grade AA, young hen turkey. The breast is broad and full, the hips are well-rounded and the entire carcass is fully covered with fat. (Right) U. S. Grade A, young hen turkey. This turkey is well-fleshed but somewhat narrow over the hips. The carcass is well covered with fat.

U. S. GRADE B.—A U. S. Grade B turkey is one that is only fairly well fleshed and has no major defects. It may be fully fleshed, or it may be a well-fleshed bird that has such defects or deformities as to disqualify it from the higher grades but permits it to be placed in U. S. Grade B. There must be a considerable quantity of meat on the breast and other meaty portions of the carcass. The back, hips, and other

bones must be fairly well covered with fat. Unlike turkeys in the two higher grades, it may show some evidence of poor bleeding and may have some scattered pinfeathers over the entire carcass. The grader should not confuse the terms "evidence of poor bleeding" with "poorly bled." Turkeys that have been poorly bled are placed below this grade. The crop must be empty. If the crop is not empty, it must be washed out or completely removed through a small incision made at the back of the neck. Slight flesh or skin bruises are permitted, but not more than three such defects are allowed on the breast. In actual grading, "a slight bruise" should be construed to mean one not more than one-half of an inch in diameter. Slight skin abrasions or discolorations are permitted. Open tears in the skin less than 3 inches in length are permitted on back and wings. Tears that have been properly sewed up may be permitted, even on the breast.

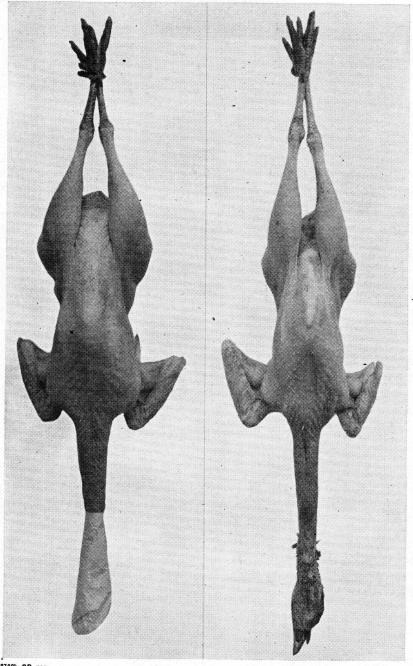
Dented or slightly crooked breastbones or other slight deformities, such as misshapen wings or legs and crooked backs are permitted. One broken wing or one broken leg is permitted if the leg is broken below the hock or if the broken bone does not protrude into the flesh of the bird, or has not caused badly bruised flesh. Unlike the two higher grades, this grade requires no particular method of dressing—the birds may be scalded, semiscalded, or dry-picked, either ice- or

dry-packed. (Fig. 2 (left).)

U. S. GRADE C.—The U. S. Grade C is the lowest grade recognized in the United States standards. A turkey that does not meet this grade is considered unfit for shipment to market. A U. S. Grade C turkey may be poorly fleshed, and the back, hips, and bones may be poorly covered with fat. The breast may be very narrow, providing little meat for slicing. No feed is permitted in the crop. The crop, however, may be removed through a small incision at the back of the neck, or it may be washed out. Because of the absence of fatty tissue under the skin, the birds may have a dark-bluish appearance, the hipbones may protrude at the joints, and the bones may be evident at

other bony parts of the carcass. (Fig. 2 (right).)

This grade may also contain birds that are fleshed well enough for any of the three higher grades but have deformities or dressing defects that disqualify them from any of those grades. Poorly bled birds may be included in this grade, and birds that have numerous pinfeathers, which may be over the entire carcass. Flesh or skin bruises, abrasions, or discolorations are permitted, but not such as to make any appreciable quantity of the carcass inedible. In actual grading, this description would be construed to mean not over one-fourth of the carcass. Dented breastbones, crooked breasts, hunchbacks, and other deformities are allowed to some degree. But if the carcass has numerous defects or any severe deformity, the turkey must be at least fairly well-fleshed to meet the requirements of U.S. Grade C. Otherwise it is considered as below grade. Broken legs or wings, even if broken in the fleshy part of the bird, are permitted if they have not bruised the flesh so badly as to make more than one-fourth of the carcass inedible. Extremely emaciated birds, or birds showing evidence of disease such as to render the meat unwholesome, are barred from all the U.S. grades.



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FIGURE 2.—(Left) U. S. Grade B, young hen turkey. The carcass is fairly well-fleshed with a slight covering of fat over the sides and back. (Right) U. S. Grade C, young hen turkey. This turkey is poorly fleshed but is edible so far as can be judged by external appearance. Scarcely any fat shows through the skin covering the carcass.

GENERAL RULES THAT APPLY TO ALL CLASSES AND GRADES

A few general requirements apply to all classes and grades of dressed turkeys. When turkeys do not meet these requirements, they are placed in a lower grade than their other characteristics would indicate, or they are thrown out of grade entirely. These general requirements relate to a number of conditions, such as freezing, cleanliness, precooling, feed in crop, picking, wholesomeness, and emaciation.

Freezing

It is possible to hold turkeys a few weeks in storage under proper temperature without their deteriorating noticeably. When marks of freezing do not appear on the carcass or are not sufficient to affect the quality of the flesh, the grade of the carcass is not lowered, even though

the carcass has been frozen.

Turkeys that show a dark, blistered, or dried skin caused by freezing cannot be placed in U. S. Grade AA and U. S. Grade A. Usually when turkeys are held at a subfreezing temperature for 60 days or longer, the skin, after being thawed, loses its bright, fresh appearance of "bloom," and the meat has a darkened appearance. If this occurs, the grade of the turkey is lowered one grade. If the flesh shows marked effects of freezing, and if dry scaly spots appear over the entire carcass, the turkey is placed in the U. S. Grade C. For example, a turkey may be of the U. S. Grade AA when put into storage but may not be even of the U. S. Grade B when it comes out of storage.

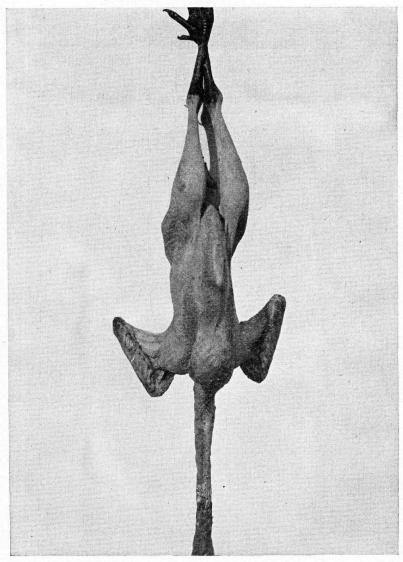
Cleanliness

A turkey that has a dirty carcass or dirty head, feet, or vent, cannot be placed in any of the U. S. grades. Dirt and filth are a cause of spoilage, and any condition that would tend to unwholesomeness throws the turkey out of grade. Clotted blood in the head turns sour rapidly and gives an offensive odor to the entire carcass. Feet that are caked with manure or dirt are full of contamination that will affect the meat of the carcass with which it comes in contact. Dirty vents may turn the surrounding meat green within a few hours. If the carcass is to meet any United States grade the feet and heads must always be washed, the vents squeezed out, and any condition that may make for unwholesomeness must be prevented.

Precooling

Turkeys that have not been properly precooled, so that all animal heat is removed from the carcass before it is packed, are likely to deteriorate in quality and even become unfit for food. Graders must be equipped with thermometers for taking internal temperatures and must make sure that the turkeys, when packed, do not have an internal temperature higher than 36° F. A lower temperature than this is desirable, and if practicable the temperature should be reduced to 34° F. before the turkeys are packed, unless they are ice-packed in which case 40° F. is adequate.

In actual practice it may be necessary for the grader at times to grade turkeys before they, have been sufficiently cooled, in order to



8819b OD neg.

FIGURE 3.—A turkey with feed in the crop. Regardless of other conditions the grader is not permitted to place this turkey in any of the United States grades unless the crop is properly removed or washed out, after which it may be placed in Grades A, B, or C.

avoid rehandling or the mixing of the producers' lots. When this is done, the grader must make sure the birds are properly precooled after they are graded. Unless the birds are sufficiently cooled beforehand, or will be cooled under supervision of the grader, it is not permissible to grade the birds in accordance with Government specifications.

Feed in Crops

An enormous loss is sustained by the turkey growers each year because of feed left in the crops. Feed in the crop not only spoils the appearance of the carcass but lowers its keeping quality. The feed ferments soon after the turkey is killed and gives off a sour odor which penetrates through the crop and causes the surrounding meat to turn sour. The skin over the crop often darkens and eventually turns dark green or black. Feed in the crop is not permitted in any of the United States grades. (Fig. 3.)

Picking

Many turkeys, because of defects in picking, are placed in a lower grade than their fleshing condition warrants. If turkeys are killed before they are mature it is very difficult to remove all the pinfeathers even though a great deal of time and care are given to that task. The garters of feathers around the hocks must always be removed, as well as all the tail and neck feathers.

During the war emergency fan feathers are permitted because of the shortage of labor in the dressing plants. It is desirable, however, that they be removed whenever possible because these feathers frequently carry dirt and filth that may induce contamination and

spoilage. (Fig. 4.)

Wholesomeness

It is emphasized again that dressed turkeys, when packed, should be free from any condition which may render them unwholesome as food. The condition and wholesomeness of the carcass are determined largely by external appearances. Decomposition is first manifest in those parts of the carcass in which the viscera lies close to the surface of the skin. It is evidenced around the vent, between the keel and pelvic bones, and along the surface of the ribs. The meat first turns dark and then green. A condition of this kind is caused by decomposition from within the birds and is usually the result of improper precooling or failure to maintain them at a sufficiently low temperature.

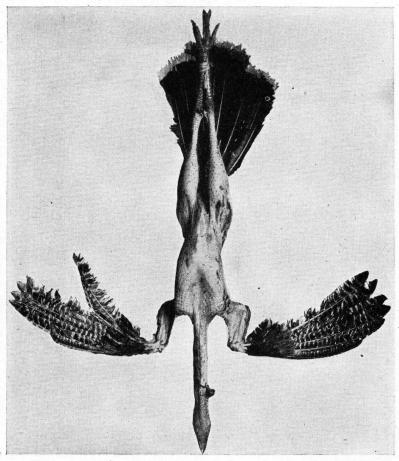
The green appearance of the skin in off-condition turkeys is caused by intestinal putrefaction and the consequent production of hydrogen sulphite, which penetrates the thin body wall and acts upon the blood in the capillaries of the skin. Any evidence of this condition elimi-

nates a carcass from any United States grade.

Evidence of such diseased conditions as accompany tuberculosis or blackhead or tumorous growth is an indication of unwholesomeness. Turkeys so affected are barred from the United States grades.

Emaciation

An extremely thin or emaciated turkey will not be placed in any United States grade, for emaciation is an indication of a diseased condition and it is usually impossible to ascertain definitely whether or not a turkey is diseased unless it is eviscerated. (Fig. 5.)



8794 OD neg.

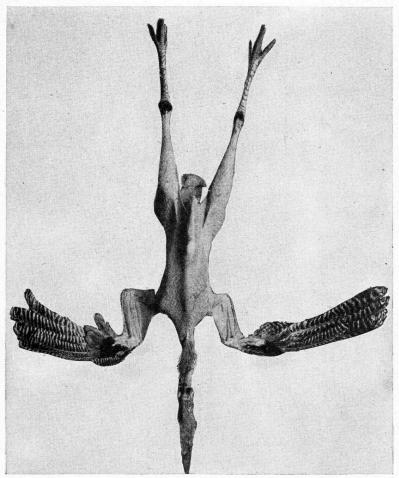
Figure 4.—An improperly picked turkey. For sanitary reasons all feathers should be removed.

GENERAL RULES THAT APPLY TO PACKING

Packages

The containers in which turkeys are packed must be clean, odorless, and of sufficient strength to carry the birds in good condition. A soiled package may mean a soiled turkey later, and a broken package may permit the turkeys in it to be damaged. Objectionable package odors may be caused by dirty or moldy packages or by odors that are characteristic of pine or some other boxing material.

Most box-packed turkeys are now packaged in standard veneer wirebound boxes. These boxes are light in weight, very durable, and are easily opened and closed. In some areas sawed wood boxes are also used for packing. Where sawed wood boxes are used, they should be made of the best quality lumber, should be free from knots, evenly and accurately cut, and preferably surfaced on both sides. Cement-coated sixpenny nails should be used in the sides and bottom if the boxes



8790 OD neg.

Figure 5.—An emaciated and poorly picked carcass. Turkeys as poorly fleshed as this are not placed in any United States grade.

are to be nailed, and fivepenny wire nails, not coated, should be used

when nailing the cover.

Barrels are used when turkeys are to be ice-packed. The shipments of ice-packed turkeys for immediate consumption have increased in certain areas. Turkeys that are to be frozen and held in storage are packed in boxes, although those intended for immediate use may be ice-packed and shipped in barrels.

Box Lining

The package should always be lined with a parchment or waxed-paper liner of good quality. These liners, if of good quality, not only keep the turkeys clean but protect them from skin drying and from abrasions caused by rubbing against the sides of the box.

Before stamping the United States grade name on any box, the

grader must see that the box has a suitable liner.

Stamping

An official stamp showing the United States grade of the turkeys contained in the package may be used only by an authorized grader or by some one under his direct supervision. The grade designation should be plainly legible, should be at least three-quarters of an inch in height, and the stamp should be approved by the Office of Distribution of the War Food Administration before it is used. The grade must be stamped on the end of the box, the stamp being neatly applied in a conspicuous place. Immediately following the grade the class must always be marked on the package in letters as conspicuous as those used in marking the grade. The number of turkeys in the container and the net weight of the turkeys must also be shown.

Uniformity

Turkeys must be packed with a high degree of uniformity in size and color. Good appearance in a box of turkeys is almost completely lacking if there is lack of uniformity in the pack. The range of weights of the individual birds in a container, except in the case of old toms, cannot vary more than 2 pounds if proper sizing is maintained and if a good solid pack is to be obtained. No matter how good a job the packer may do, the turkeys will not present an even appearance if uniformity in size is not maintained. Light-colored, milk-fed turkeys should be packed separately from the yellow-colored or grain-fed birds. Most markets prefer the light-colored birds, a few prefer yellow-skinned birds, but no market prefers mixed colors in a package.

DEFECTS AND DEFORMITIES TO BE CONSIDERED IN GRADING

Defects are usually caused by poor workmanship in dressing, whereas deformities are usually due to inheritance or to injury or to conditions existing during the growth of the turkey. Any person who grades turkeys should have clearly in mind what is meant by certain terms that are used in describing the standards for the different classes and grades.

Bruises

Large numbers of bruised turkeys are found on the market each year, bringing great losses to producers and packers. Improper handling of the live turkeys on the farms and at the packing plants is the chief cause. With proper care this loss could be avoided. A bruise on the breast is considered a much greater defect than a bruise on any other part of the carcass. The extent to which the grade of the carcass is lowered depends on the extent and location of the bruise. (Fig. 6.)

Torn Skin

How serious the effect of a torn skin is depends on the location. When on the back or wings, the tear is not considered so serious as if it is on the breast, and larger tears are allowed on those parts of the carcass. Most tears are due to poor sticking, which makes the feathers difficult to pull. Pulling against the slant of the feathers also causes many tears, especially on the younger birds.

The skin of the bird is nature's protection for the meat underneath.

If it is injured or torn, spoilage begins rapidly where the meat is exposed to the air. For that reason no open tears in the skin are permitted in U. S. Grade AA and U. S. Grade A. (Fig. 7 (left).)

Skin Abrasions

Abrasions are marks on the skin that cause it to be rough and discolored. The damage is usually to the outer layer of skin and does not penetrate to the flesh. Abrasions are usually caused when the turkey is being dressed by rubbing the skin to get the feathers out instead of picking them out. They may also be caused by rough handling after the birds are killed. Abrasions are most common on the leg, near the knee, and on the wings. When the outer layer of skin, or cuticle, is removed by rubbing or "slapping" in dressing, the inner layer turns dark as it dries out from exposure to the air. Abrasions are one of the most objectionable faults brought about by unskillful dressing.

Poor Bleeding

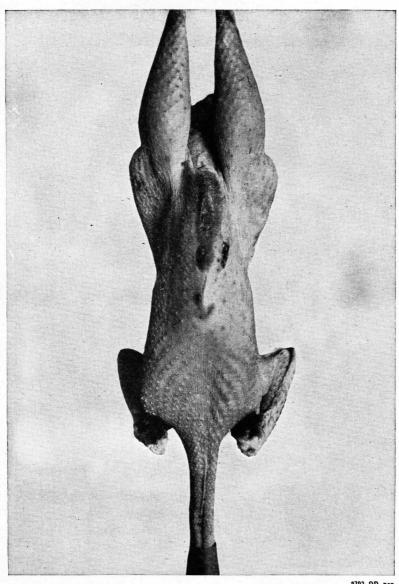
Good bleeding is highly important. A bird that has been poorly bled soon develops a characteristic "strong" taste and an offensive odor. Its keeping quality is not so good as it would be if the bird had been well bled. When a turkey has not been completely bled, small red pin spots show along the tip of the wings and over the hips. If the bleeding was not complete these blood marks show wherever the larger feathers have been pulled. The marks are most noticeable on the tail, along the thigh, and on the streak of fat that extends over either side of the breast. If the bleeding was done very poorly, the neck is blue and discolored from blood clots that form underneath the skin.

Discoloration

Skin discoloration, or reddening, is often caused by the carcasses touching each other on the cooling racks. It may also result from a sweat after they are packed if they are not kept sufficiently cool. If the skin is not thoroughly dry when the turkeys are packed, discoloration is likely to occur wherever one bird rests against or touches another. Usually a slightly bloody liquid will form under the skin at the juncture of contact causing it to appear red. Discoloration of the skin over the crop often occurs if the turkey swallows blood while bleeding after it has been stuck in the mouth.

Crooked Breasts

A very crooked breast is a common cause for disqualifying birds for the higher grades. Crooked breastbones, according to most authorities, are sometimes due to improper feeding—usually to a lack of minerals in the feed. Some inherited tendencies also cause weak bony structures in offspring from defective breeding stock. Crooked breasts are not allowed in the U. S. Grade AA or U. S. Grade A. The extent or degree to which the breast is crooked is one of the principal factors in determining the grade. If the breastbone is slightly curved but not crooked, and if the curvature does not interfere with the slicing of the meat, the bird may be graded U. S. Grade A. (Fig. 7 (right).)

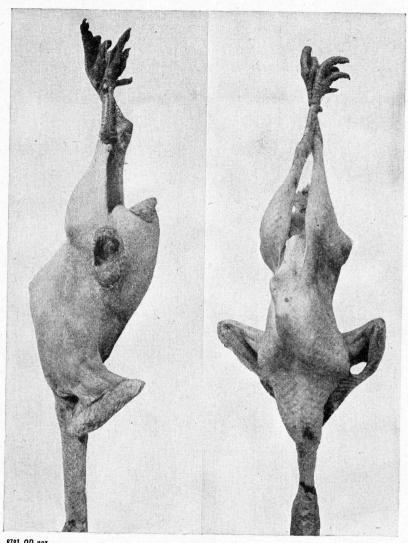


8793 OD neg.

FIGURE 6.—Turkey with bruised breast. This turkey was placed in U. S. Grade C. Except for the bruise, it would have graded U. S. Grade A.

Dented Breastbones

A dent is a notch in the breastbone. It is caused by the turkey's resting its breast on the roost. It is not considered so serious a defect as a crooked breast because it does not interfere with the slicing of the breast meat as much as does a crooked breast. (Fig. 8.)



8781 OD neg. 8857b OD neg.

FIGURE 7.—(Left) This U. S. Grade A turkey is reduced to U. S. Grade C, on account of torn skin. Had the tear been properly sewed up or had it occurred on the back or wing, the turkey would have graded U.S. Grade B. (Right) Turkey with a crooked breastbone. A deformity as marked as this places the carcass in the lowest grade.

Peaked Breasts

A peaked breastbone results in a deformed breast and should be considered equivalent to a slightly crooked breast. It does not affect the eating qualities of the meat, but lowers the commercial value of the bird considerably from the standpoint of appearance and puts the bird in a grade below U.S. Grade A. (Fig. 9 (left).)

Crooked Backs

Any deformity in the bones of the back which throws the body out of line is known as a crooked back. Usually such a deformity is not noticeable when one is looking at the breast of the turkey, and it is far less serious than a hunchback as it does not throw the meat of the breast out of line. A turkey with a crooked back cannot be placed in a grade above U. S. Grade B.

Hunchbacks

A hunchback is considered as a major deformity in a turkey. If the bird is fairly well fleshed it may be placed in the lowest grade, but if not, the bird will be below any grade. Such turkeys, even when well-fleshed, bring low prices. (Fig. 9 (right).)

Crooked Feet and Toes

Crooked, misshapen feet and toes are common deformities among turkeys. If they are only slightly misshapen no attention need be paid to them in grading, but if they are definitely deformed the turkey may not be put in the U. S. Grade AA. If the feet and toes are badly misshapen the turkey is placed in the U. S. Grade A only if it is otherwise of U. S. AA quality.

Stagginess

Producers often make the mistake of holding their young toms until the flesh is no longer fine-grained and tender. The bird must then be placed in a lower grade. In grading chickens a separate class is provided for such birds, and they are called stags, but such is not the case with turkeys. Instead, they are placed in a lower grade. (Fig. 10 (left).)

Internal Feather Growth

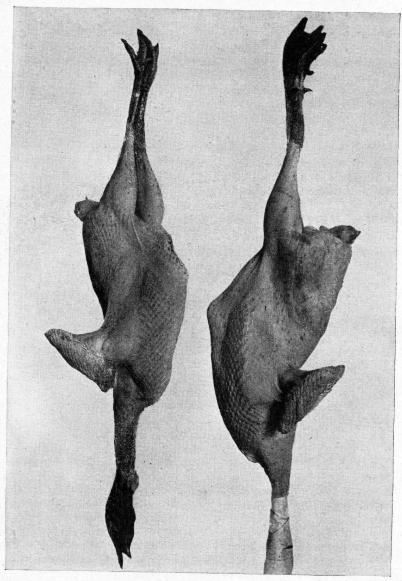
Internal feather growth is more prevalent in old hen turkeys than in any other class. Affected turkeys will have a rough, scaly skin. The ends of the feathers will protrude slightly through the cuticle, the remaining part of the feathers, sometimes 3 or 4 inches, being underneath the skin. The producer can do nothing to remedy this condition, and it is almost impossible to detect it until after the turkey has been killed and picked. In severe cases the affected turkey should be placed in the lowest grade. (Fig. 11.)

Swollen Joints

Swollen joints constitute a minor deformity. Turkeys so affected are barred from the U. S. Grade AA. If the joints are badly swollen the turkey should be placed below the U. S. Grade A. (Fig. 12.)

Rlue Backs

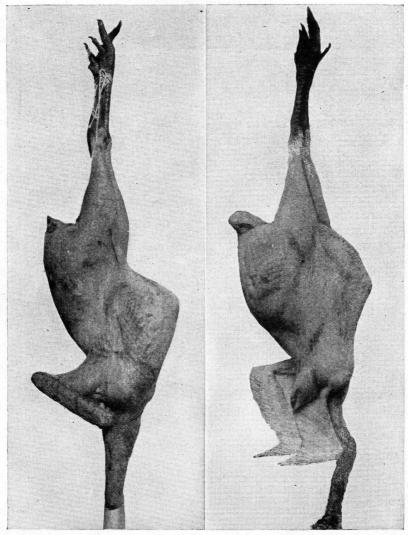
Blue back means that the skin has turned a bluish-green color because of color pigment development in the skin. It is prevalent in flocks in which tail picking has occurred. It is commonly found on the backs of breeder hens that have been injured by the treading of



8791 OD neg.

FIGURE 8.—Turkeys with dented breastbones. The dent in the breast of the turkey on the right measured one-eighth of an inch in depth; the one on the left, one-fourth of an inch in depth.

the toms. No abnormal skin pigmentation is permitted in the U. S. Grade AA; it is permitted only on the tail of a bird that is U. S. Grade A and no further than the hips on a bird that is U. S. Grade B. (Fig. 10 (right).)

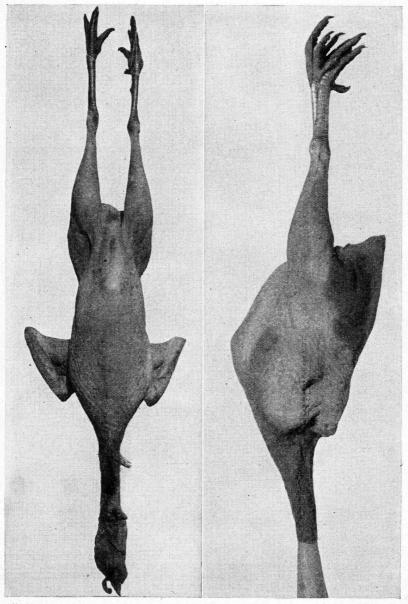


8782c OD neg. 8813 OD neg.

Figure 9.—(Left) Turkey with a peaked breastbone. If full-fleshed and properly dressed, this turkey would grade U. S. Grade B; if not full-fleshed, it would grade U. S. Grade C. (Right) A well-fleshed turkey with a hunched back. As this turkey is well-fleshed it will be placed in U. S. Grade C.

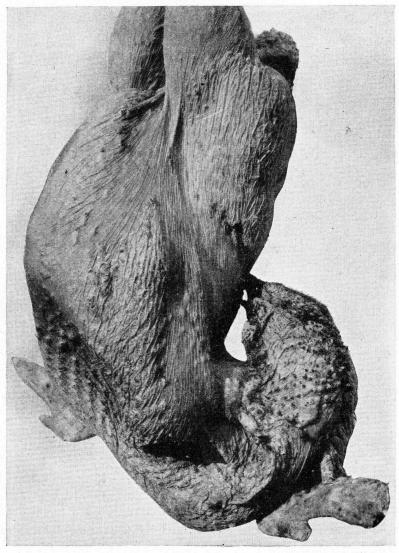
WEIGHT SPECIFICATIONS

Under the United States standards the weight of the individual bird is not a factor in determining its grade. If a turkey has the required fleshing characteristics and other qualities, it may be placed in the top grade regardless of its weight.



8819c OD neg. 8783a OD neg.

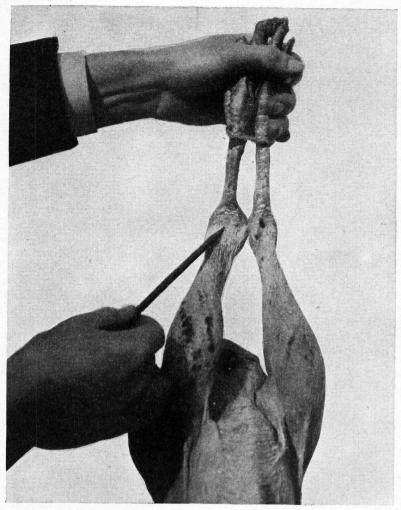
Figure 10.—(Left) A staggy young tom. As the spurs and head are well developed and the breast has become puffed and flabby, this turkey belongs in the grade of U. S. Grade B young tom. (Right) Blue-back turkey. The discoloration extends beyond the tail and half way to the hips. This turkey would be graded U. S. Grade B.



8811 OD neg.

Figure 11.—Turkey showing evidence of internal feather growth. This turkey has been reduced in grade from a U.S. Grade A Old Hen to U.S. Grade C Old Hen.

Hen turkeys, unless bred for "small size" that weigh less than 9 pounds or tom turkeys that weigh less than 12 pounds, will not as a rule be sufficiently fleshed or finished to meet the requirements of the U. S. Grade AA and U. S. Grade A. It is possible for turkeys that have been properly raised and dressed and weigh only 6, 7, or 8 pounds to be of U. S. Grade A when they meet all other requirements of that grade.



8810 OD neg.

Figure 12.—Turkey with swollen joints. When the leg is so affected the turkey must be reduced one grade.

It is always desirable to pack the smaller turkeys separate from the larger ones and mark them accordingly. The weight of individual birds in one box must not vary more than 2 pounds unless they are old toms, and it is preferable to limit the weight range to 1 pound. If the 2-pound variation is used, the recommended weight classifications are as follows:

For Grades AA, A, and B, young toms and hen turkeys should be graded to not more than a 2-pound weight variation; that is, 8 to 10 pounds, over 10 to 12 pounds, etc. Old toms and Grade C turkeys should be graded to not more than a 3-pound variation; that is, 9 to 12 pounds, over 12 to 15 pounds, etc.

GRADE LABEL AND STAMP

When individual turkeys are officially graded according to United States standards, each turkey may be individually labeled with its United States grade, or the box or barrel in which the turkeys are packed may be stamped with the United States grade (p. 19). The grade label or tag that is used on the bird also gives the age of the turkey. (Fig. 13.)

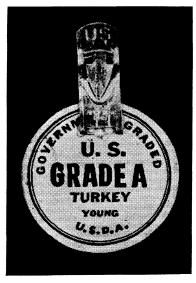


FIGURE 13.—Seal and tag used to label the grade on an individual turkey. They are usually attached to the skin of the neck or the web of the wing.

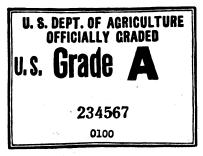


FIGURE 14.—Impression of a Government stamp used in marking packages. These stamps are issued only to licensed turkey growers.

The label is fastened to the carcass by means of an approved seal and cannot be removed without destroying the seal. Different colored labels are now being used for the different grades. Turkeys of the U. S. Grade C are not individually labeled. Whether or not the packer or shipper of turkeys wishes to have the individual turkeys labeled, he may have the outside of the package stamped with the Government grade. This stamp gives the grade of the turkeys in the package, the grader's license number, or the certificate number. (Fig. 14.)

LICENSE CARD

When the applicant has been examined and found to possess the proper qualifications to grade turkeys in accordance with the United States standards, he is eligible to receive a grader's license card, which authorizes him to do this work. A grader's card is not issued, however, unless the applicant has grading work to perform for an individual or firm who has applied for the grading service to the agency with which the Office of Distribution of the War Food Administration is cooperating in carrying on the grading work. The license card empowers the grader to certify to the class, grade, and condition of

dressed turkeys. The signature of the immediate superior officer or of a representative of the Office of Distribution is affixed to the card. The date on which the card becomes invalid is plainly marked on the card. These cards are issued only from season to season and must be renewed each year.

Persons who have a financial interest in the turkeys to be graded—for instance, plant or pool managers or their close relatives—are not eligible to be licensed. Generally producers are not licensed to grade

their own turkeys.

As soon as the expiring date has been reached or as soon as the grader has finished his work for the season, the license card must be returned to his immediate superior officer, who must return it to the Office of Distribution, War Food Administration, Washington 25, D. C.

An individual receiving his salary from the plant or cooperative pool for which grading work is done, may be licensed if he is under

bond.

GRADING CERTIFICATE

A grading certificate is issued for each lot or car of turkeys graded. (Fig. 15.) The original and one copy of the certificate are delivered to the shipper or to the receiver of the turkeys, whichever applied for the grading, one copy is mailed to the Office of Distribution, War Food Administration, Washington, D. C., and one copy is sent to the supervisor. The grader may retain a copy. The certificate is typewritten whenever practicable, and on it is supplied full information regarding the number of boxes of each class and grade in the lot, the net weight of each class and grade, and other valuable information. It also states the condition of the carcasses.

The fee charged for turkey grading services may be based either on fee and expenses, as shown on the sample certificate, or on the basis of a contract with the applicant. When services are rendered on a contract basis the word "contract" is inserted in place of the

actual fee and no expenses are shown under that heading.

Each certificate is signed by the grader, who certifies to the truth

of the statements contained therein.

The certificates are serially numbered, and a record of each is kept. When a certificate is lost or destroyed, the grader must immediately notify his superior officer. If the certificate should be torn, soiled, or incorrectly made out, it must be marked "void" and sent to the supervising grader. At the close of the grading season all unused grading certificates must be mailed immediately to the State supervisor, who in turn promptly mails them to the Office of Distribution, War Food Administration.

REGRADING AT TERMINAL MARKETS

The terminal-market buyer or receiver of a lot or car of turkeys, which was graded at shipping point according to the United States standards, may obtain a regrading of the lot at any terminal market at which the United States grading service on turkeys is available.

If regrading is done at the terminal market, the regrading certificate supersedes the certificate issued at the shipping point. Therefore if the grading at the shipping point is not done correctly, it will be recognized and the offending party called upon to correct his mistake or make amends for it.

SAMPLE WAR FOOD ADMINISTRATION	Form AMA-25 (Superseding FP	I-71)							GRICULTI	JRE		No 1	370 H	
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to the act making appropriations for the United States Department of Agriculture, I graded, on the date stated below; the poultry described below, and that the kind, class, grade, and/or condition of said poultry, when graded were as stated below; the poultry described below, and that the kind, class, grade, and/or condition of said poultry, when graded were as stated below; the poultry described below, and that the kind, class, grade, and/or condition of said poultry, when graded were as stated below; the poultry described below; t	* Receiver or	buyer.	MODELO		·····		Add	ress		- LU. V.				
Condition of car Good	to the act me	king a	ppropriation	s for th	e United S	tates De	partment of	Agricu	lture, I grad	led, on t	he date stat	ed below	ry, pursuant , the poultry	
Amount of ice	Car initials s	nd num	ber	RT 19	582			Kind	of car	Refr	gerator			
Closed 1250 Define Temperature 36 degrees Close	Condition of	car	<u> </u>	ood			Dra	in	Open		Floor racks	In p	Lage	
Close			Pull							mperat	ure	8	degrees.	
Total packages 177	Closed1.5	O p.m	• T	emperat	ure	36	degre	es.						
Average temperature holding room	Description o	(Time) f poult:	ry: Finish .			Color	Bright	Blo	om Good	4	. How dres	sed Sem	L-soald	
Class	Total packag	es1	77 1	otal por	ands • 22,	117	Quantity	examine	d 411		Kind of pac	kage	Boxes	
GRADES CLASS AND WEIGHTS	Average temp	erature	holding roo	m	10°F,		Date	of grad	ing Oct	ber	11-12, 19	43		
ORADE	Internal temp	erature	of poultry	Highes	t	36			Lowest	3	<u> </u>			
ORADE				- Annual V	GRA	DES. C	LASS ANI	WEIG	HTS					
Phys. Weight Phys. Phys. Weight Phys. Weight Phys. Weight Phys. Weight Phys. Phys. Phys. Weight Phys.			CTARR	Π_				T	_	T-	Ctam =	T	TOTAL	
U.S.Grade A 2 252 22 2574 4 520 28 3346 U.S.Grade B 2 252 50 5510 13 1815 80 10100 125 15677 U.S.Grade C 1 127 2 230 1 137 20 2600 24 3094 Total 5 651 54 6514 14 1952 104 15220 177 22117 *As stated by applicant. Lot numbers and identifying marks: Bach box marked Lot No. 7. Every bird except U. S. Grade C tagged with U. S. Grade. Remarks: Turkeys precooled at temperature near freesing. Packages (were) stamped with grade, **Transcriptioner number*, and **gatural readings* for identification. Fee \$20.00 Expenses 5.00 Address Grand Junction, Colorado	GRADE			_ ··								Phos		
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Total 5 651 54 6514 14 1952 104 13220 177 22117 *As stated by applicant. Lot numbers and identifying marks: Each box marked Lot No. 7. Every bird except U. S. Grade C tagged with government tag and seal boxes stemoiled with U. S. Grade. Remarks: Turkeys precooled at temperature near freezing. Packages (were) stamped with grade, **practicular number*, and **practicular number*, and **practicular number* free \$20.00 Expenses 5.00 Benry Smith Grader. Total \$25.00 Address Grand Junction, Colorado	U.S.Grade	В		2	252	50	3510	13	1815	80	10100	125	15677	
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FIGURE 15.—Poultry grading certificate.

OUTSTANDING CONSIDERATIONS IN GRADING

The grader should always bear in mind the three factors of major importance that determine the grade of a dressed turkey: (1) The

quantity of flesh on the carcass in comparison with the quantity of the inedible portion, (2) the quality of the flesh, and (3) the sales appeal of the bird as typified by its appearance. A turkey must rate high in all three of these factors in order to meet the requirements of the two higher grades.

It is not enough for a turkey merely to be full-fleshed and softand tender-meated; it must also show good workmanship in dressing so that the sales value is not lowered by blemishes on the carcass, torn or abrased skin, pinfeathers, or other defects that spoil the appearance even though they do not lower the eating quality of the meat.

It is impossible for graders to render a satisfactory grading service according to the United States standards unless they have a thorough knowledge of the United States standards for classes and grades of dressed turkeys. This is obtained by a careful study of the grade descriptions and the grading chart. A good grader soon comes to know almost at once the grade in which a carcass will be placed after an examination of the characteristics that determine its grade. This may appear difficult at first, but if the work is undertaken in a systematic way, the knowledge comes readily. To insure uniformity in grading some graders select, early in the day, a number of turkeys that are fully typical of each grade and hang them on a rack where they can be conveniently referred to. Then if there is doubt in regard to any bird graded later, a comparison with those on the rack will indicate the correct grade. Graders are expected to attend one of the turkey-grading schools held in various parts of the country each year to keep in touch with newest developments and in line with other graders.

There are always a number of turkeys near the median line between two grades. In grading at a shipping point such "line birds" are usually placed in the lower grade because natural changes, occurring in transit, often would necessitate placing them in a lower grade by the time they reach the market. When the grading is done at the terminal market the line birds may more safely be placed in the higher

grade.

When producers bring dressed turkeys to concentration plants they may want information about the methods of grading or reasons for placing a certain bird in a certain grade. Graders who are supervised by the Government are advised to make careful and patient explanation to all inquirers who have an interest in the birds being handled. Strict grading eventually benefits the producers by creating a demand for turkeys so graded. On many markets a preference is shown for the United States graded and labeled turkeys. When producers understand this thoroughly they are ready to endorse the work.

Graders keep in close touch with the State supervisor who is their immediate supervising officer. In case of dispute or uncertainty this supervisor is consulted. The supervisor is held responsible for the grading work in his State and, in turn, holds each grader responsible for the work performed by him. Through these and similar measures a grading service has been built up that is gradually benefiting pro-

ducers, dealers, and consumers.

32